

# Colorectal Cancer:

## The Importance of Prevention and Early Detection

### The Burden of Colorectal Cancer

#### How Common Is Colorectal Cancer?

Colorectal cancer—or cancer of the colon or rectum—is the second leading cause of cancer-related death in the United States. The American Cancer Society estimates that 56,600 Americans will die of colorectal cancer this year. Colorectal cancer is also one of the most commonly diagnosed cancers in the United States;

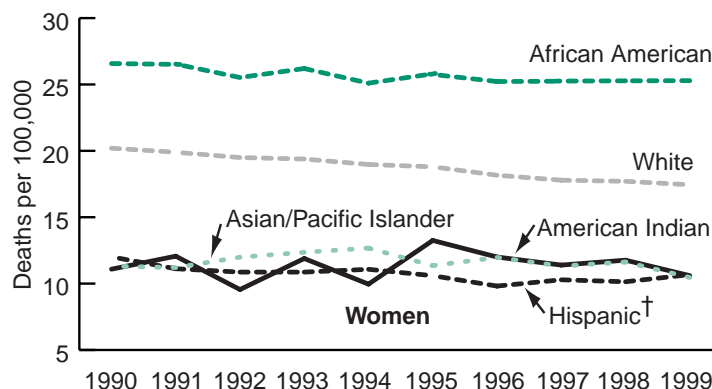
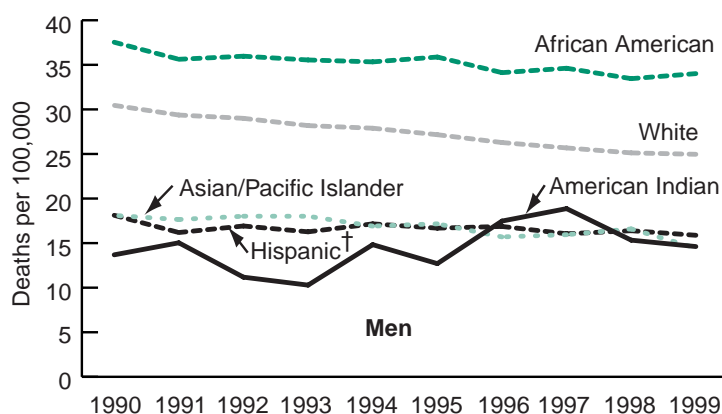
approximately 148,300 new cases will be diagnosed in 2002. For men, colorectal cancer follows skin, prostate, and lung cancers in frequency; for women, it follows skin, breast, and lung cancers.

#### Who Is at Risk?

The risk for developing colorectal cancer increases with advancing age. Risk factors include inflammatory bowel disease, a personal or family

history of colorectal cancer or colorectal polyps, and certain hereditary syndromes. Lack of regular physical activity also contributes to a person's risk for colon cancer, but does not effect rectal cancer risk. Other factors that can contribute to the risk for colorectal cancer include low fruit and vegetable intake, a low-fiber and high-fat diet, obesity, alcohol consumption, and tobacco use.

**Rates of Colorectal Cancer Death Among Men and Women, by Race and Ethnicity, United States, 1990–1999\***



\*Rates are age-adjusted to 2000 U.S. population.

†Includes Hispanics of any race.

Source: CDC, National Center for Health Statistics.



DEPARTMENT OF HEALTH AND HUMAN SERVICES  
Centers for Disease Control and Prevention

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## Prevention and Early Detection: Keys to Reducing Deaths

Reducing the number of deaths from colorectal cancer depends on detecting and removing precancerous colorectal polyps as well as detecting and treating the cancer in its early stages. Colorectal cancer can be prevented by removing precancerous polyps or growths, which can be present in the colon for years before invasive cancer develops.

Two tests have proven to be beneficial in screening for colorectal cancer

- The **fecal occult blood test (FOBT)** detects blood that is not visible in a stool sample. One U.S. clinical trial reported a 33% reduction in colorectal cancer deaths and a 20% reduction in colorectal cancer incidence among people offered an annual FOBT. In trials elsewhere, screening every other year reduced colorectal cancer deaths 15% in the United Kingdom and 18% in Denmark.
- **Flexible sigmoidoscopy** is a screening procedure that uses a hollow, lighted tube to visually inspect the wall of the rectum and part of the colon. In case-control studies, deaths from colorectal cancer within reach of the sigmoidoscope were 59% lower among people who had undergone a sigmoidoscopy

than among those who had not undergone the procedure.

Physicians commonly use two recommended tests for colorectal cancer screening

- **Colonoscopy** – a screening procedure that uses a hollow, lighted tube to visually inspect the internal wall of the rectum and the entire colon. Samples of tissue or cells may be collected for closer examination, or polyps may be removed during this procedure.
- **Double-contrast barium enema** – a series of X-rays of the colon and rectum taken after the patient is given an enema containing barium dye, followed by an injection of air.

These two tests are used to examine the interior wall of the entire colon and can be used as screening tests or as follow-up diagnostic tools when the results of another screening test are positive. Another procedure, called a **digital rectal examination**, involves a doctor inserting a lubricated, gloved finger into the rectum to feel for abnormal areas. This test inspects only a limited area and is not recommended as a screening method.

## Screening for Colorectal Cancer

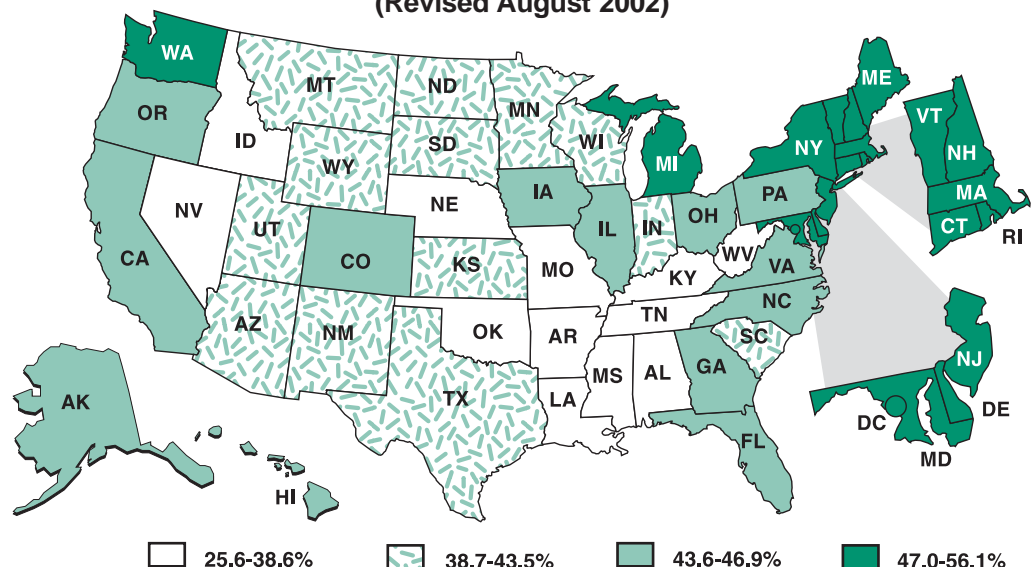
### Current Guidelines

Several scientific organizations recommend regular screening for all adults aged 50 years of age or older. Recommended screening procedures include the following three tests

- FOBT every year.
- Flexible sigmoidoscopy every 5 years.
- Total colon examination by colonoscopy every 10 years or by double-contrast barium enema every 5–10 years.

Persons at higher risk should begin screening at a younger age and may need to be tested more frequently. Detailed guidelines for colorectal cancer screening have been developed by the U.S. Preventive Services

**Percentage of Adults Aged 50 Years of Age or Older Who Had Colorectal Cancer Screening Tests Within the Recommended Time Interval, by State, 1999\***  
(Revised August 2002)



\*Fecal occult blood test within the past year or sigmoidoscopy or colonoscopy within the past 5 years.

Source: CDC, Behavioral Risk Factor Surveillance System.

Task Force, the American Cancer Society, and the Interdisciplinary Task Force (convened by the Agency for Healthcare Research and Quality and supported by five major gastroenterology societies). These guidelines emphasize the key health benefit of colorectal cancer screening—finding and removing precancerous polyps and cancer—which either prevents the development of cancer or detects the disease at an early, more treatable stage.

### Underuse of Screening

Screening for colorectal cancer lags far behind screening for other cancers. Findings from the Centers for Disease Control and Prevention's (CDC) state-based Behavioral Risk Factor Surveillance System (BRFSS) indicate that in 1999, only 44% of adults aged 50 years of age or older had ever had a sigmoidoscopy or colonoscopy for

screening or diagnostic purposes, and only 34% of respondents had received one of these screening tests within the past 5 years. Only 40% reported ever having had an FOBT using a home kit, and only 21% had received this test during the preceding year. Women were slightly more likely than men to report having had an FOBT, whereas men reported having had a sigmoidoscopy more often than women. Only 44% of adults aged 50 years of age or older had received at least one of these screening tests within the recommended time interval.

Despite the availability of effective screening tests, colorectal cancer screening is underused. These findings underscore the need to increase awareness and promote the use of colorectal cancer screening exams at regular intervals.

## CDC's Activities Targeting Colorectal Cancer

One goal of the national health objectives for 2010 is to reduce the colorectal cancer death rate. To support this goal, CDC developed a comprehensive colorectal cancer initiative designed to

- Increase public awareness of colorectal cancer.
- Increase awareness of screening guidelines among health care providers.
- Monitor national colorectal cancer screening rates.
- Promote increased patient-provider communication about colorectal cancer screening.
- Support quantitative and qualitative research efforts.

- Provide funding to state programs to implement colorectal cancer priorities.

These objectives can be accomplished by building national and state partnerships, promoting national colorectal cancer screening, supporting education and training for the public and health professionals, and conducting surveillance and research activities.

With approximately \$12 million available in fiscal year (FY) 2002 to target colorectal cancer, CDC provides national leadership to encourage colorectal cancer prevention and early detection, as the following examples illustrate.

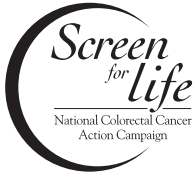
## National and State Partnership Building

- CDC is continuing its partnership in the **National Colorectal Cancer Roundtable**, a network of public and private organizations that promote colorectal cancer awareness and screening on the national level. CDC and the American Cancer Society convened the Roundtable in 1997.
- CDC funds **North Carolina, Texas, Colorado, Michigan, Massachusetts, and the Northwest Portland Area Indian Health Board** to conduct comprehensive cancer control programs, including efforts targeting colorectal cancer. These programs are establishing broad-based coalitions, coordinating

surveillance systems, and developing and disseminating public and health provider education programs. In FY 2001 and 2002, CDC provided additional funds to expand colorectal cancer activities in some of these states.

- **The Washington Business Group on Health (WBGH)** consulted with CDC to conduct a seminar for employers that provided information about the burden and impact of colorectal cancer on employees and employers as well as ways to promote healthy behaviors and encourage screening for colorectal cancer.

## Promotion of Colorectal Cancer Screening



**Screen for Life** is a multimedia campaign created and implemented by CDC and the Centers for Medicare and Medicaid Services (CMS). This campaign is designed to promote colorectal cancer screening for men and women aged 50 years of age

or older. **Screen for Life** addresses common myths and educates Americans about the two ways that screening saves lives—by detecting colorectal cancer early or by finding pre-cancerous polyps (growths) so that they can be removed before they become cancerous. **Screen for**

**Life** materials can be viewed, ordered, or downloaded at [www.cdc.gov/cancer/screenforlife](http://www.cdc.gov/cancer/screenforlife).

### Education and Training

CDC has developed a training program called **A Call to Action** to raise primary care providers' awareness and knowledge about prevention and early detection of colorectal cancer. CDC also offers Web-based tools that providers can use to help patients select screening options. These online tools can be viewed, ordered, or downloaded at [www.cdc.gov/cancer/colorctl/calltoaction](http://www.cdc.gov/cancer/colorctl/calltoaction).

## Surveillance and Research

CDC supports epidemiological and behavioral science research efforts in colorectal cancer. Selected examples include

- Assessing the country's capacity to meet increasing demands to provide colorectal cancer screening and follow-up examinations by surveying a national sample of health care providers who own endoscopic equipment (i.e., sigmoidoscopy or colonoscopy).
- Assessing the rate of complications that occur when colonoscopy is used to detect colorectal cancer in asymptomatic patients. This study follows a previous CDC study that assessed the rate of complications from screening with flexible sigmoidoscopy. The earlier study reported a very low rate of hospitalization (0.02%) due to complications. Results from the colonoscopy study have not been released.
- Collecting, analyzing, and reporting colorectal cancer screening rates from national surveillance systems, such as BRFSS and the National Health Interview Survey.
- Analyzing and reporting nationally representative data on the physician and health system factors that may influence screening and diagnostic follow-up in community practice, in collaboration with the National Cancer Institute and CMS.
- Assessing the validity of self-reported colorectal cancer screening among members of three health maintenance organizations (HMOs)—Kaiser-Northern California, Kaiser-Georgia, and Health Partners Minneapolis.
- Analyzing the variation in physician charges and insurance reimbursement rates for colonoscopy and flexible sigmoidoscopy exams used for colorectal cancer screening.
- Examining whether patients with stage III or late-stage colon cancer have received the recommended therapy (i.e., standard of care). This project also is evaluating the quality of colorectal cancer treatment data in national cancer registries.
- Evaluating the feasibility of adding a colorectal cancer screening measure into the Health Plan Employer Data and Information Set (HEDIS), a national system that monitors the quality of care and performance of managed care plans.

CDC also funds several intervention research projects designed to test strategies that may increase colorectal cancer screening, including the following examples:

- The **Morehouse School of Medicine** is conducting intervention research on community-based strategies to improve the use of screening for colorectal cancer among African Americans from five metropolitan Atlanta counties.
- **West Virginia University** is working to increase colorectal cancer screening through a community-based intervention that targets members of rural Appalachian churches.
- The **University of Massachusetts Medical School** and the **University of Pittsburgh Cancer Institute** are conducting systems research to improve use of colorectal cancer screening in primary health care systems.

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